

Twin Dual-Control Pentodes

9-PIN MINIATURE TYPE

COMMON-CATHODE, GRID No.1 & GRID No.2

DARK HEATER

*For Combined Color Demodulator and Matrix
Amplifier Applications in Color TV Receivers
Having High-Level Demodulation Systems*

ELECTRICAL CHARACTERISTICS

Bogey Values

| | | | |
|-----------------------------------|-------|-----|----|
| Heater Voltage, AC or DC. | E_f | 6.3 | V |
| Heater Current. | I_f | 760 | mA |

Direct Interelectrode Capacitances

Without external shield

G3 to P (each unit, with other unit
connected to ground)

C_{g3-p} 2.7 pF

G1 to (K, Pp2, Pp1, G3p2, G3p1, G2, H).

C_{g1-all} 15.5 pF

G3p1 to (K, Pp2, Pp1, G3p2, G2, G1, H)

C_{g3-all} 6.0 pF

G3p2 to (K, Pp2, Pp1, G3p1, G2, G1, H)

C_{p-all} 3.7 pF

Pp1 to (K, Pp2, G3p2, G3p1, G2, G1, H)

Pp2 to (K, Pp1, G3p2, G3p1, G2, G1, H)

C_{g3-g3} 0.10 pF

For the following characteristics, with both units operating,
see Conditions

| | | | |
|---------------------------|-------|-------|----------|
| Plate Resistance. | r_p | 50000 | Ω |
| Approx., each unit | | | |

| | | | |
|---|------------|------|------------------|
| Grid-No.1-to-Plate Transconductance | $g_m(g1p)$ | 5800 | μmhos |
| Each unit | | | |

| | | | |
|---|------------|-----|------------------|
| Grid-No.3-to-Plate Transconductance | $g_m(g3p)$ | 350 | μmhos |
| Each unit | | | |

| | | | |
|---------------------------|-------|-----|----|
| DC Plate Current. | I_b | 7.6 | mA |
| Each unit | | | |

| | | | |
|---|----------|------|----|
| DC Grid-No.2 Current ^a | I_{c2} | 14.5 | mA |
|---|----------|------|----|

Cutoff DC Grid-No.1 Voltage

Approx., each unit

| | | | |
|---------------------------------------|--------------|------|---|
| For $I_b = 100 \mu\text{A}$ | $E_{c1(co)}$ | -6.3 | V |
|---------------------------------------|--------------|------|---|

Cutoff DC Grid-No.3 Voltage^b

Approx., each unit

| | | | |
|---------------------------------------|--------------|-------|---|
| For $I_b = 100 \mu\text{A}$ | $E_{c3(co)}$ | -16.5 | V |
|---------------------------------------|--------------|-------|---|

Conditions

| | | | |
|-------------------------|-------|-----|---|
| Heater Voltage. | E_f | 6.3 | V |
|-------------------------|-------|-----|---|

| | | | |
|---------------------------|-------|-----|---|
| DC Plate Voltage. | E_b | 100 | V |
| Each unit | | | |

| | | | |
|---|----------|---|---|
| DC Grid-No.3 (Control-Grid) Voltage | E_{c3} | 0 | V |
| Each unit | | | |

| | | | |
|---|----------|-----|---|
| DC Grid-No.2 (Screen-Grid) Voltage. | E_{c2} | 100 | V |
|---|----------|-----|---|

| | | | |
|---|----------|------|---|
| DC Grid-No.1 (Control-Grid) Voltage | E_{c1} | -2.5 | V |
|---|----------|------|---|



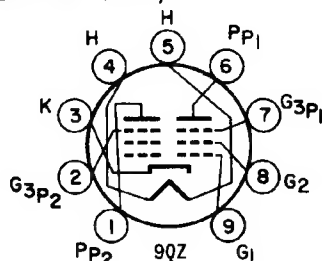
6LE8

MECHANICAL CHARACTERISTICS

Operating Position. Any
 Type of Cathode Coated Unipotential
 Maximum Overall Length. 3-1/16 in
 Maximum Seated Length 3-13/16 in
 Length, Base Seat to Bulb Top 2-7/16 \pm 3/32 in
 Excluding tip
 Diameter. 0.750 to 0.875 in
 Envelope. JEDEC T6-1/2
 Dimensional Outline (JEDEC 6-4) See *General Section*
 Base. Small-Button Noval 9-Pin (JEDEC E9-1)

TERMINAL DIAGRAM (Bottom View)

Pin 1—Plate of Unit No.2
 Pin 2—Grid No.3 of Unit No.2
 Pin 3—Cathode
 Pin 4—Heater
 Pin 5—Heater
 Pin 6—Plate of Unit No.1
 Pin 7—Grid No.3 of Unit No.1
 Pin 8—Grid No.2
 Pin 9—Grid No.1



DESIGN MAXIMUM RATINGS

| | | | |
|---|--------------|--|--------------------------------------|
| DC Plate Voltage (Each unit). | E_b | 300 | V |
| DC Grid-No.2 Voltage. | E_{c2} | 150 | V |
| Heater-Cathode Voltage | | | |
| Peak. | e_{hkm} | $\begin{cases} +200 \\ -300 \end{cases}$ | $\begin{matrix} V \\ V \end{matrix}$ |
| Average ^c | $E_{hk(av)}$ | 100 | V |
| Heater Voltage, AC or DC. | E_f | 5.7 to 6.9 | V |
| Grid-No.2 Input | P_{g2} | 2 | W |
| Plate Dissipation (Each unit) | P_b | 2 | W |

^a Units in parallel (P_{p1} connected to P_{p2} ; $G3P1$ connected to $G3P2$).

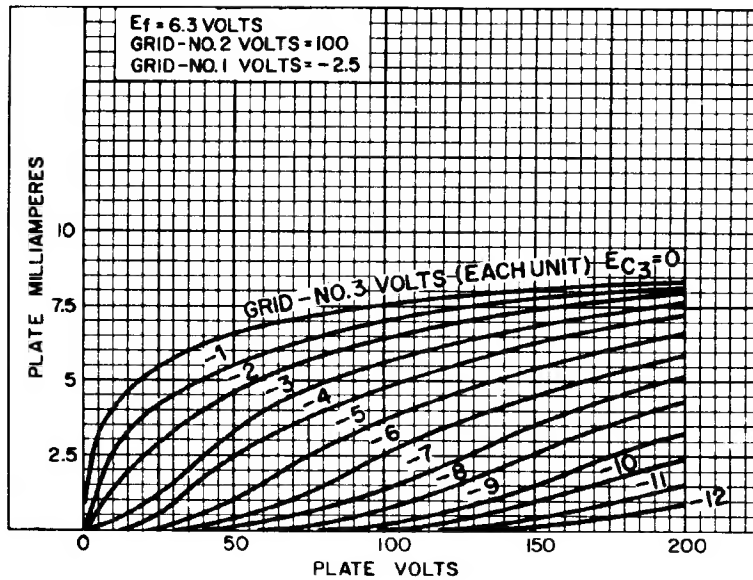
^b For this test, $E_{c1} = -3$ V so that the Grid-No.2 Input rating will not be exceeded.

^c Measured with a dc meter.



Typical Plate Characteristics

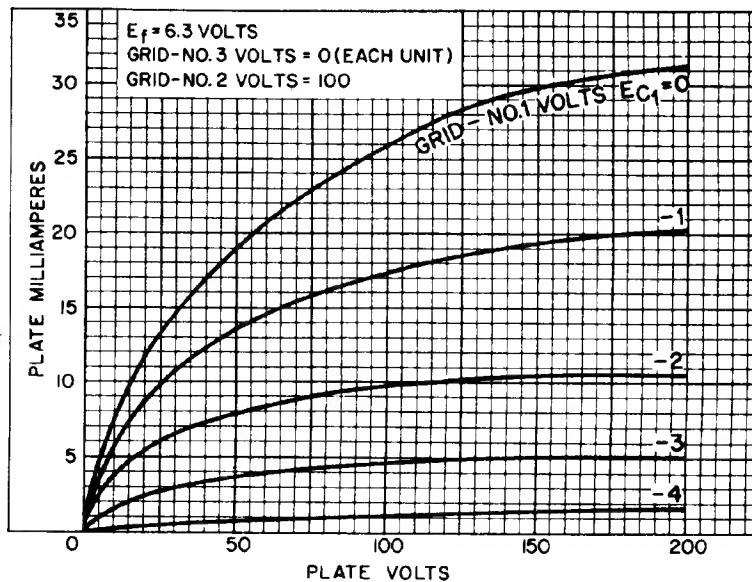
Each Unit, with Both Units Operating



92CS-13459

Typical Plate Characteristics

Each Unit, with Both Units Operating



92CS-13460

